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10/523,761	02/07/2005	Bernard Charles Sherman	PT-2099001	1380

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EXAMINER	
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ART UNIT	PAPER NUMBER
1615	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,761	SHERMAN, BERNARD CHARLES	
	Examiner	Art Unit	
	Jeffrey T. Palenik	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5 and 7-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5 and 7-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

STATUS OF THE APPLICATION

Receipt is acknowledged of Applicant's Request for Continued Examination (RCE), Amendments and Remarks filed 28 September 2009. Said remarks and amendments are entered on the record. The Examiner further acknowledges the following:

No claims have been added or cancelled.

Claims 1 and 10 have been amended to include the negative limitation "and said composition lacking a second population of particles comprising a water-soluble drug", which is discussed herein.

As such, claims 1, 3-5 and 7-11 continue represent all claims currently under consideration.

INFORMATION DISCLOSURE STATEMENT

No new Information Disclosure Statement (IDS) have been submitted for consideration.

MAINTAINED REJECTIONS

The following rejections are maintained from the Final Office Action dated 28 May 2009:

CLAIM REJECTIONS - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-5 and 7-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships missing particularly from claims 1 and 10 are: what the instantly claimed composition further comprises if not a coating over the "uncoated particles" (i.e. what else beyond the drug and polymer are within the composition).

The remaining claims are rejected as being dependent from the rejected independent claims.

PREVIOUS RESPONSE TO ARGUMENTS

Applicant's remarks with regard to the indefiniteness rejection of claims 1 and 10 under 35 USC 112, second paragraph, have been fully considered but they are not persuasive.

Applicant alleges 1.) that the Examiner has not specifically pointed out the location of essential subject matter with in the statements of record (i.e. the specification) and 2.) that there is nothing essential to the invention that is not the drug and the polymer.

In response, the Examiner respectfully points to Applicant's lone Example discussed over the entirety of page 4 of the disclosure. Of particular interest is the discussion of filling the prepared granules into capsules (lines 14-15). Of further interest is the dissolution testing of the encapsulated granules per the US Pharmacopoeia (USP) (lines 19-23). Although the claims are

interpreted in light of the specification, limitations from the specification are not read into the claims. See MPEP §2111 and *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Given that Applicant's lone Example depicting a final encapsulated product discusses the use of an additional and seemingly requisite element of the invention in the capsule, it is thus interpreted by the Examiner that the recited invention omits a structurally essential element from said invention, absent evidence to the contrary.

For these reasons, Applicant's arguments are found unpersuasive. Said rejection is therefore **maintained**.

RESPONSE TO NEWLY PRESENTED ARGUMENTS

Applicant's remarks with regard to the indefiniteness rejection of claims 1 and 10 under 35 USC 112, second paragraph, have been fully reconsidered but they continue to be unpersuasive.

Applicants argue that nowhere in the Example is it stated that the capsule is a required or essential part of the invention and that a statement of essentiality would be required for such a rejection under the second paragraph of 35 §112. Applicants further argue that statements made by the Examiner in the previous action make it clear that there is no clear statement in the specification which indicates the essential nature of a capsule.

In response, the Examiner respectfully disagrees and submits that the only support Applicants provide in the specification concerning *any* pharmaceutical dosage form is that of a capsule within the Example provided [emphasis added]. Concerning Applicants' inventive active/polymer beads, it appears, according to the Example, that in order to exhibit the recited

bimodal release, the particles must first be delivered to the stomach and then the small intestine. To ensure delivery as well as the ascribed release percentages, Applicants' produced particles are inserted into a capsule of unknown composition and then exposed to gastric fluid environment. That is to say, in response to Applicants' remarks concerning MPEP §2172.01, that the Example, which provides the clearest delineation of the invention, depicts the capsule as a necessary element of the composition in order to ensure delivery of the active pellet population as well as to ensure the instantly claimed 50% release within the gastric fluid. The specification provides no support for other dosage forms or their related excipients and how said components would contribute to or detract from the instantly claimed drug release profile. For instance, a tablets formed of the beads of Example 1 and compressed into a tablet with a binder versus a disintegrant would conceivably elicit two distinct release profiles. Finally, concerning the Example, the Examiner considers the capsule to be essential since the release profile is determined or achieved *after* encapsulation of the particles [*emphasis added*].

For these reasons, Applicants' arguments are found unpersuasive. Said rejection is therefore **maintained**.

CLAIM REJECTIONS - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devane et al. (USPN 6,228,398).

The instant claims are directed to a composition comprising a single population of uncoated particles of a homogenous mixture, which consists essentially of a water-soluble drug and an enteric polymer, wherein the ratio of polymer to drug ranges from greater than 4 to less than 100. Claims 3 and 4 recite narrower ranges for the ratio. Claims 5 and 7 recite size limitations to the particles formed wherein the particles should pass through a #8 mesh screen, but not through a #16 mesh screen. Per Sigma-Aldrich, the #8 mesh size corresponds to a size of 2.38 mm and the #16 mesh size corresponds to 1.19 mm (see *Particle size - sieve mesh conversion chart*). Therefore, the limitation of claim 5 is interpreted as reciting particles ranging in size from 1.19-2.38 mm. With regard to the release limitation, recited in claim 7, until some material difference in the properties of the composition is demonstrated, said limitation is considered by the Examiner to be directed toward the composition which is instantly claimed. Given that the limitation recited in claim 7 is functional, the claim is considered by the Examiner as reciting the same subject matter as claim 5. Methylphenidate is recited as the water-soluble drug and polyvinyl acetate phthalate (PVAP) is recited as the enteric polymer (claims 8 and 9).

Newly added claim 10 recites the same subject matter as claims 1 and 5, further specifying methylphenidate as the water-soluble drug and reciting a drug/polymer ratio of greater than 10 to less than 50. Claim 11 recites PVAP as the enteric polymer.

The teachings of Devane are discussed above where they apply to the instant claims 1, 3 and 4, particularly in the *Response to Arguments* section. Devane further teaches multiparticulate modified release compositions containing methylphenidate wherein said composition is applied to non-pareil seeds, which range in size up to 0.85 mm.

Devane does not expressly teach the claimed size range for the prepared granules (i.e. between #8 and #16 mesh), as instantly claimed by Applicant. Nor does Devane expressly teach methylphenidate as being exclusively mixed with PVAP to form the claimed granules.

As discussed above, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make a composition comprising populations of particles consisting of the water-soluble drug methylphenidate and a release matrix polymer such as PVAP, as suggested by Devane, modify the levels or ratios of the ingredients, and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because Devane teaches, as discussed above, that the PVAP is a functionally equivalent matrix polymer to those which are expressly taught, either in the claims or in the Examples. Furthermore, in view of the Examples as well as the teachings of claims 1 and 6, an artisan of ordinary skill would have been motivated to create a first population of particles consisting of one ratio of methylphenidate to PVAP and then create a second population consisting of the same components, but mixed in a

different ratio. Such a composition would not only consist of the instantly claimed components, but also possess differing polymer/active ratios, which would, in effect, demonstrate distinct release rates, thereby producing the instantly claimed bimodal release.

Regarding the polymer/drug ratio and the sized granules, since the values and formats of each parameter with respect to the claimed composition are adjustable, it follows that each is a result-effective parameter that a person having ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ. For example, as taught in Example 1, the release characteristics of the modified release component are taught as being variable simply by changing the composition and thickness of the coating applied to the non-pareil seed. Thus, it would have been customary for an artisan of ordinary skill, to vary the amounts of methylphenidate and polymer within the composition, as well as to adjust the thickness of the composition which is applied to the seed, in order to achieve the desired component ratio and bimodal release pattern. Thus, absent some demonstration of unexpected results from the claimed parameters, optimization of any of these parameters would have been obvious at the time of Applicant's invention.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the reference, especially in the absence of evidence to the contrary.

PREVIOUS RESPONSE TO ARGUMENTS

Applicant's arguments with regard to the rejection of claims 1, 3-5 and 7-11, under 35 USC 103(a) as being unpatentable over the combined teachings of Devane et al. have been fully considered but they are not persuasive.

Applicant alleges that "nowhere in Devane et al. is it taught or suggested that a *composition* may have only two ingredients (the active ingredient and a single polymer) homogenously mixed into a single population of granules" [*emphasis added*] (Remarks, pg. 6, end of ¶2). It is further alleged that the skilled artisan would not be motivated to create two populations having the same ingredients but with different ratios in order to demonstrate bimodal release of the drug and that such a composition is not within the scope of the instant claims.

In response to Applicant's argument that the references fail to show certain features of Applicant's invention, it is noted that the features upon which Applicant relies (i.e., that the composition may have *only* two ingredients) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Otherwise stated, the scope of Applicant's claims are more broadly recited than what is being argued in the Remarks. Applicant's claims are directed to a composition which *comprises* a single population of uncoated particles of a homogenous mixture, wherein said mixture consists essentially of a water-soluble drug and an enteric polymer [*emphasis added*]. Since the overall claimed composition is recited as comprising the particles of the homogenous drug/polymer mixture, it follows, per MPEP §2111.03, that the scope of the claims is open to including

additional components (e.g. a second population of particles prepared by mixing a different ratio of the same components) within said overall composition.

In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

For these reasons, Applicant's arguments are found unpersuasive. Said rejection is therefore **maintained**.

RESPONSE TO NEWLY PRESENTED ARGUMENTS

Applicants' arguments with regard to the rejection of claims 1, 3-5 and 7-11, under 35 USC 103(a) as being unpatentable over the teachings of Devane et al. have been fully reconsidered but they remain unpersuasive.

Applicants allege that the amendment to claims 1 and 10 wherein "said composition lacking a second population of particles comprising a water-soluble drug" is sufficient enough to clarify and overcome the Examiner's concerns, namely the art of record.

In response, the Examiner respectfully disagrees and maintains that Applicants' addition of a negative limitation to the base claims do not overcome the teachings of Devane. First, Applicants' have not provided adequate support for the negative limitation. That is to say, Applicants provide no discussion in the claims or specification as to what water-soluble drugs

are excluded from the invention. Secondly, the negative limitation does not preclude the inclusion of other populations of particles which contain components *other than* water-soluble drugs (e.g. excipients or *water-insoluble* drugs) [*emphases added*].

The courts have found that any negative limitation or exclusionary proviso must have basis in the original disclosure. The mere absence of a positive recitation is not basis for an exclusion. See *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984) See also MPEP §2173.05(i).

Lastly, the Examiner is not persuaded by the amended "exclusionary" limitation because it continues to be recited with that Applicants' open claim language. That is to say the claims continue to be openly directed to an oral composition "comprising" the single population of uncoated particles (see MPEP §2111.03).

In the instant case, the teachings of Devane expressly teach in claim 1 that the composition, which contains a second population of active particles, further teaches that the active agent of said subsequent population may be *different* [*emphasis added*]. Devane further teaches that the active ingredient may encompass a number of other compounds, some of which are well known in the art as being water-insoluble (e.g., morphine, fentanyl, hydrocodone, etc.) (col. 6, lines 13-63).

For these reasons, Applicants' arguments are found unpersuasive. Said rejection is therefore **maintained**.

NEW OBJECTIONS/REJECTIONS

In light of Applicants' amendments and the above withdrawn rejections, the following objections and rejections are newly added:

CLAIM REJECTIONS - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Independent claims 1 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The claims now both recite negative limitations concerning the composition of the instantly claimed oral administration form, specifically reciting that "said composition [lacks] a second population of particles comprising a water-insoluble drug". Contrary to what is indicated in Applicants' response, dated 28 September 2009, the original disclosure provides no support for the newly added negative limitation. The Examiner respectfully submits that after carefully examining and reconsidering the instant disclosure in its entirety, Applicants, at best, would have support for excluding an additional population of particles comprising methylphenidate or a salt thereof as the water-soluble drug. As discussed above, Applicants' base claims continue to recite "comprising" language, the scope of which is nearly limitless; it is the most open of transitional phrases (MPEP §2111.03) and that anything in addition to the instantly claimed uncoated,

bimodal-release drug pellets may be present in a composition of the art and still read on the instant claim. Coupled with the recitation of "comprising" is the aforementioned negative limitation, which when considered in light of the specification, is unclear as to what is being excluded from the instant invention. Thus, given the absence of such a recitation or discussion in the original disclosure, the addition of the negative limitation constitutes **new matter**. The Examiner further submits that, given the openness of the claim language, the added amendment does not preclude the exclusion of particle populations *comprising* a) water-soluble drugs other than methylphenidate or its salts, b) water-*insoluble* drugs, or even c) other particles which contain no drug at all, to name a few [*emphases added*]. Discussion concerning the addition of negative limitations to an invention is provided above and is found in the MPEP (see MPEP §2173.05(i)). Herein, and for the purposes of examination on the record, the amended limitations of claims 1 and 10 are broadly and reasonably interpreted by the Examiner as being open to the inclusion of any additional particle populations as long as said populations contain no form of methylphenidate.

Claims 1 and 10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for oral compositions consisting of a single population uncoated particles of a homogenous mixture consisting essentially of the water-soluble methylphenidate drugs and/or salts and an enteric polymer, (see Example on pg. 4), does not reasonably provide enablement for compositions "comprising" (claims 1 and 10) *any* water-soluble drug (claim 1), employing any pellet size (claim 1).

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention *commensurate in scope* with these claims [*emphasis added*]. The limitation reciting "comprising" as it pertains to the instant claims 1 and 10, as discussed above, is read by the Examiner as allowing any other components to be included in the oral administration form, thereby claiming a broader scope than for which Applicants' have provided support. In the instant case, for example, were Applicants' bimodal particles to be compressed into a tablet with a binder, there is no support provided showing that the same release profile would be attained. Similarly, there is no support provided to show that the single population of uncoated particles can consist essentially of a water-soluble drug other than methylphenidate or its salts and achieve the same release profile. Further, regarding the openness of the water-soluble drug of the particle and the newly added negative limitation, discussed above, it is not clear what the scope of the invention is concerning the inclusion or exclusion of "water-soluble drugs". Lastly, concerning the particle size as recited in claims 5, independent claim 10, and as discussed in the Example, claim 1 is broadly and reasonably interpreted as reciting achievement of the instantly claimed bimodal drug release independent of particle size. When interpreted in light of Applicants' specification (e.g. Example), it is noted that Applicants' take care to use only particles which range in size between #16 mesh (e.g. about 1.2 mm) and #8 mesh (e.g. 2.4 mm) in order to achieve the desired release profile. Thus, it follows that claim 1, as recited, is not commensurate in scope with the instant disclosure as it appears that Applicants are claiming that any particle size will exhibit the desired behavior.

To this end, given that the instant invention is drawn to an oral composition "comprising" particles consisting essentially of "a water-soluble drug" and an enteric polymer, and lacking any

other "populations comprising a water-soluble drug", the Examiner respectfully submits that one of ordinary skill in the art would be faced with an undue experimental burden in attempting to practice the invention commensurate in scope with the claims. That is, the instant invention is seemingly concerned with claiming a much wider scope of oral, bimodal drug release composition than is supported by or discussed within the specification, and the ordinary skilled practitioner would need to undergo undue experimentation in order to ascertain which "water-soluble drugs" or "particle sizes", for example, would be capable of being used in the instant composition without seeking further guidance from the prior art. As such, the disclosure of the instant specification does not sufficiently support the much broader scope of embodiments for the generic oral composition of claim 1.

All claims have been rejected; no claims are allowed.

CORRESPONDENCE

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey T. Palenik whose telephone number is (571) 270-1966. The examiner can normally be reached on 7:30 am - 5:00 pm; M-F (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax can be reached on (571) 272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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/Jeffrey T. Palenik/
Examiner, Art Unit 1615

/Robert A. Wax/
Supervisory Patent Examiner, Art Unit 1615